



SAFETY DATA SHEET
AZ 400K DEVELOPER

Substance No.: GHSBBG7070
Version 2.0

Revision Date 01/03/2011
Print Date 01/15/2011

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : AZ 400K DEVELOPER
Substance No. : GHSBBG7070
Product Use Description : Intermediate for electronic industry

Company : AZ Electronic Materials USA Corp.
70 Meister Ave.
Somerville, NJ 08876

Telephone : 1-908-429-3562
Telefax : 1-908-429-5982

Emergency telephone number : 1-800-424-9300 (CHEMTREC)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards : CORROSIVE
SEVERE EYE IRRITANT
REPRODUCTIVE EFFECTS
MILD RESPIRATORY IRRITANT

GHS Classification

Signal word : Danger

Hazard category, Hazard class : Corrosive to metals, Category 1
Hazard category, Hazard class : Serious eye damage/eye irritation, Category 2A
Hazard category, Hazard class : Reproductive toxicity, Sub-category 1B
Hazard category, Hazard class : Specific target organ toxicity - single exposure, Category 3

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients



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Component	CAS-No.	Weight percent
Potassium borates	20786-60-1	5 - 15
Potassium hydroxide	1310-58-3	2

Non-hazardous ingredients

Component	CAS-No.	Weight percent
Water	7732-18-5	> 85

SECTION 4. FIRST AID MEASURES

First aid procedures

- General advice** : Remove soiled or soaked clothing immediately
If someone exposed to the product feels unwell, contact a doctor and show this safety data sheet.
Adhere to personal protective measures when giving first aid
- Inhalation** : Remove the casualty into fresh air and keep him calm. Call in a physician immediately and show him the Safety Data Sheet.
- Skin contact** : Wash off immediately with plenty of water for at least 15 minutes. Call in a physician immediately and show him the Safety Data Sheet.
- Eye contact** : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Remove contact lenses.
- Ingestion** : Do NOT induce vomiting. If conscious, drink plenty of water. Call in a physician immediately and show him the Safety Data Sheet.

SECTION 5. FIRE-FIGHTING MEASURES

Flammable properties

- Flash point** : Water-based material with low level of combustible solid content.
- Ignition temperature** : not determined
- Lower explosion limit** : not determined



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Upper explosion limit : not determined

Fire fighting

Suitable extinguishing media : Product itself is non-combustible; Fire extinguishing method of surrounding areas must be discussed.

Further information : The product itself does not burn.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective equipment and precautions for firefighters

Special protective equipment for fire-fighters : Well closed full protective clothing (coat and pants) including helmet.
Wear self contained breathing apparatus for fire fighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Environmental precautions : Do not allow entry to drains, water courses or soil

Methods for containment / Methods for cleaning up : Wearing appropriate personal protective equipment, contain spill, ventilate area of spill or leak. Collect onto inert absorbent. Place in suitable container.

SECTION 7. HANDLING AND STORAGE

Handling

Handling : Use only in area provided with appropriate exhaust ventilation.
Wear personal protective equipment.
Avoid inhalation of vapour or mist.

Storage

Further information on storage conditions : Transport and store under dry conditions tightly closed.
Store at appropriate temperature. See label for details.
Keep sealed in original container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines



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Potassium hydroxide	1310-58-3	C: 2 mg/m3	ACGIH
		C: 2 mg/m3	OSHA P0

Engineering measures

Engineering measures : Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Eye protection : Safety eyewear to protect against splashes.

Hand protection : Rubber gloves

Skin and body protection : Clothing suitable to prevent skin contact.

Respiratory protection : Breathing apparatus needed only when aerosol or mist is formed.
Use NIOSH approved respiratory protection.

Hygiene measures : Observe the usual precautions when handling chemicals.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state : liquid
Color : clear
colourless

Odor : odourless

Safety data

Flash point : Water-based material with low level of combustible solid content.

Ignition temperature : not determined

Lower explosion limit : not determined

Upper explosion limit : not determined

pH : approx. 12.9



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Freezing point	: approx. 32 °F (0 °C)
Boiling point	: approx. 212 °F (100 °C)
Vapour pressure	: not determined
Density	: approx. 1.085 g/cm ³
Viscosity, dynamic	: not determined
Evaporation rate	: not determined
Loss on drying	: 88 %

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	: Freezing conditions and high temperatures Avoid contact with strong acids. Avoid contact with alkaline materials. Avoid contact with oxidizing agents.
Hazardous decomposition products	: No hazardous decomposition products known.
Hazardous reactions	: Hazardous polymerisation does not occur. Note: Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Data for AZ 400K DEVELOPER

Skin irritation	: Species: rabbit Result: No skin irritation Classification: not irritating
	: Species: rabbit Result: DOT four hour rabbit skin test of this product was negative for corrosion.
Eye irritation	: Species: rabbit Result: severe eye irritant. Classification: Irritating to eyes.



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Data for Potassium hydroxide (1310-58-3)

Acute oral toxicity : LD50: 273 mg/kg
Species: rat
Source : OECD SIDS

: LD50: 284 mg/kg
Species: rat
Method: Calculation method
Source : NITE

Skin irritation : Result: Corrosive
Classification: Corrosive

Eye irritation : Result: corrosive
Classification: Corrosive

12. ECOLOGICAL INFORMATION

Data for AZ 400K DEVELOPER

Additional ecological information : No ecological testing was carried out on the preparation.
Do not allow to enter soil, waterways or waste water

SECTION 13. DISPOSAL CONSIDERATIONS

Further information : Dispose of as special waste in compliance with local and national regulations.

Contaminated packaging : Empty containers should be taken to local recyclers for disposal.

RCRA hazardous waste : RCRA number: D002
Yes -- If it becomes a waste as sold.

SECTION 14. TRANSPORT INFORMATION

DOT
Not restricted



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IATA
UN number : 1719
Description of the goods : Caustic alkali liquid, n.o.s.
(Potassium borate)
Class : 8
Packing group : III
Labels : 8
Packing instruction (cargo aircraft) : 821
Packing instruction (passenger aircraft) : 819
Packing instruction (passenger aircraft) : Y819
Environmentally hazardous : no

IMDG
UN number : 1719
Description of the goods : CAUSTIC ALKALI LIQUID, N.O.S.
(Potassium borate)
Class : 8
Packing group : III
Labels : 8
EmS Number 1 : F-A
EmS Number 2 : S-B
Marine pollutant : no
Environmentally hazardous : no

SECTION 15. REGULATORY INFORMATION

Notification status

TSCA : All components of this product are listed on the TSCA Inventory.

DSL : All components of this product are on the Canadian DSL list.

Carcinogenicity

IARC No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen



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NTP	by OSHA. No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 302 Reportable Quantity : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

US State Regulations

Massachusetts Right To Know Components : Potassium hydroxide 1310-58-3

Pennsylvania Right To Know Components	: Potassium borates	20786-60-1
	Potassium hydroxide	1310-58-3
	Water	7732-18-5

New Jersey Right To Know Components	: Potassium borates	20786-60-1
	Potassium hydroxide	1310-58-3
	Water	7732-18-5



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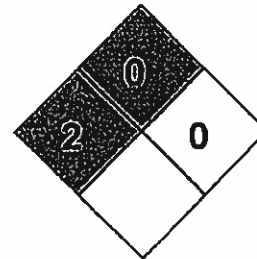
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SECTION 16. OTHER INFORMATION

Further information

HMIS Classification : Health hazard: 2
Flammability: 0
Reactivity: 0
PPE:X

NFPA Classification : Health hazard: 2
Fire Hazard: 0
Reactivity Hazard: 0
Special Hazards: NONE



GHS-Labeling

Symbol(s) :

Signal word : Danger

Hazard statements : May be corrosive to metals.
Causes serious eye irritation.
May cause respiratory irritation.
May damage fertility or the unborn child.

Precautionary statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep only in original container.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF IN EYES: Rinse cautiously with water for several minutes.



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Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.

If eye irritation persists: Get medical advice/ attention.

Absorb spillage to prevent material damage.

Storage:

Store locked up.

Store in corrosive resistant polyethylene container with a resistant inliner.

Disposal:

Dispose of contents/container in accordance with local regulations.

The tetramethylammonium ion (TMA), as TMAH, in this developer is toxic at low levels to the water flea ceriodaphnia dubia (CD) used in the whole effluent toxicity (WET) biomonitoring test. Data from the supplier suggests that continuous input of 60-100 ppm TMA to a small POTW should not cause WET toxicity. It is expected that discharges to a sizable POTW will not affect the ability to pass the WET tests. However, discharges to a small POTW or direct discharges to surface waters should be carefully reviewed. Contact AZ Electronic Materials Product Safety for additional information (908-429-3562 or 908-429-3586).

This information is supplied under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, and is offered in good faith based on data available to us that we believe to be true and accurate. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable to the material. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate for that use. No warranty, express or implied, is made regarding the accuracy of this data, the hazards connected with the use of the material, or the results to be obtained from the use thereof. We assume no responsibility for damage or injury from the use of the product described herein. Data provided here are typical and not intended for use as product specifications.

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